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## TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission

Application Number	10/574,825 ✓
Filing Date	April 6, 2006
First Named Inventor	Atsushi Takahashi
Art Unit	N/A
Examiner Name	Not Yet Assigned
Attorney Docket Number	07200/077001

### ENCLOSURES (Check all that apply)

<input type="checkbox"/> Fee Transmittal Form	<input type="checkbox"/> Drawing(s)	<input type="checkbox"/> After Allowance Communication to TC
<input type="checkbox"/> Fee Attached	<input type="checkbox"/> Licensing-related Papers	<input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences
<input type="checkbox"/> Amendment/Reply	<input type="checkbox"/> Petition	<input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)
<input type="checkbox"/> After Final	<input type="checkbox"/> Petition to Convert to a Provisional Application	<input type="checkbox"/> Proprietary Information
<input type="checkbox"/> Affidavits/declaration(s)	<input type="checkbox"/> Power of Attorney, Revocation	<input type="checkbox"/> Status Letter
<input type="checkbox"/> Extension of Time Request	<input type="checkbox"/> Change of Correspondence Address	<input checked="" type="checkbox"/> Other Enclosure(s) (please identify below):
<input type="checkbox"/> Express Abandonment Request	<input type="checkbox"/> Terminal Disclaimer	International Preliminary Report on Patentability and Translation of Written Opinion of the International Searching Authority
<input type="checkbox"/> Information Disclosure Statement	<input type="checkbox"/> Request for Refund	Return Receipt Postcard
<input type="checkbox"/> Certified Copy of Priority Document(s)	<input type="checkbox"/> CD, Number of CD(s) _____	
<input type="checkbox"/> Reply to Missing Parts/ Incomplete Application	<input type="checkbox"/> Landscape Table on CD	
<input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53		
	<b>Remarks</b>	

### SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	OSHA LIANG LLP		
Signature			
Printed name	Jonathan P. Osha		
Date	July 28, 2006	Reg. No.	33,986



Application No. (if known): 10/574,825

Attorney Docket No.: 07200/077001

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Transmittal (1 page)

International Preliminary Report on Patentability and Translation of Written Opinion of the International Searching Authority (7 pages)  
Postcard

## PATENT COOPERATION TREATY

## PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY  
(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference FP04-0307-00	FOR FURTHER ACTION		See item 4 below
International application No. PCT/JP2004/014865	International filing date ( <i>day/month/year</i> ) 07 October 2004 (07.10.2004)	Priority date ( <i>day/month/year</i> ) 07 October 2003 (07.10.2003)	
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237			
Applicant NAGASE & CO., LTD.			

1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).

2. This REPORT consists of a total of 7 sheets, including this cover sheet.

In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.

3. This report contains indications relating to the following items:

<input checked="" type="checkbox"/> Box No. I	Basis of the report
<input type="checkbox"/> Box No. II	Priority
<input type="checkbox"/> Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input type="checkbox"/> Box No. IV	Lack of unity of invention
<input checked="" type="checkbox"/> Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
<input type="checkbox"/> Box No. VI	Certain documents cited
<input checked="" type="checkbox"/> Box No. VII	Certain defects in the international application
<input checked="" type="checkbox"/> Box No. VIII	Certain observations on the international application

4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).

Date of issuance of this report 20 June 2006 (20.06.2006)
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The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland  Facsimile No. +41 22 740 14 35	Authorized officer  Masashi Honda  Telephone No. +41 22 338 70 10
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## PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

To:

PCT

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

		Date of mailing (day/month/year)
Applicant's or agent's file reference <b>FP 04-0307-00</b>		<b>FOR FURTHER ACTION</b> See paragraph 2 below
International application No. <b>PCT/JP2004/014865</b>	International filing date (day/month/year) <b>07.10.2004</b>	Priority date (day/month/year) <b>07.10.2003</b>
International Patent Classification (IPC) or both national classification and IPC		
Applicant <b>NAGASE &amp; CO., LTD.</b>		

## 1. This opinion contains indications relating to the following items:

- Box No. I Basis of the opinion
- Box No. II Priority
- Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- Box No. IV Lack of unity of invention
- Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- Box No. VI Certain documents cited
- Box No. VII Certain defects in the international application
- Box No. VIII Certain observations on the international application

## 2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

## 3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/JP	Authorized officer
Facsimile No.	Telephone No.

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/JP2004/014865

**Box No. I                      Basis of this opinion**

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

This opinion has been established on the basis of a translation from the original language into the following language \_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).

2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material

a sequence listing

table(s) related to the sequence listing

b. formal of material

in written format

in computer readable form

**c. time of filing/furnishing**

contained in the international application as filed.

Filed together with the international application in computer readable form.

furnished subsequently to this Authority for the purposes of search.

3.  In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

#### 4. Additional comments:

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/JP2004/014865

Box No. V	Reasoned statement under Rule 43bis 1(a)(i) with regard to novelty, inventive step or industrial applicability: citations and explanations supporting such statement
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**1. Statement**

Novelty (N)	Claims	<u>1-20</u>	YES
	Claims	<u>          </u>	NO
Inventive step (IS)	Claims	<u>7, 8, 11, 15-20</u>	YES
	Claims	<u>1-6, 9, 10, 12-14</u>	NO
Industrial applicability (IA)	Claims	<u>1-20</u>	YES
	Claims	<u>          </u>	NO

**2. Citations and explanations:**

Document 1: JP, 9-266183, A (Texas Instruments Japan Ltd.), 7 October, 1997 (07.10.97)

Document 2: JP, 2002-265888, A (Hitachi Chemical Co., Ltd.), 18 September, 2002 (18.09.02)

Document 3: JP, 2002-353252, A (Hitachi Chemical Co., Ltd.), 6 Dumber, 2002 (06.1202)

Document 4: JP, 9-263734, A (Texas Instruments Japan Ltd.), 7 October, 1997 (07.10.97)

The subject matter of claim 1 does not appear to involve an inventive step in view of documents 1 and 2 cited in the ISR. With regard to the adhesive described in document 1, a person skilled in the art could have easily conceived the idea of adjusting the range of viscosity of the adhesive at the time of pasting by taking into consideration the prevention of airspace and excess runoff of adhesive suggested in [0028] of document 2.

The subject matters of claims of claims 2 and 3 do not appear to involve an inventive step in view of documents 3 and 4 cited in the international search. A person skilled in the art could have easily conceived the idea of (1) regarding the adhesive provided on the back side of a wafer described in document 3 as referring to the description of document 1 or that of document 4 and (2) adjusting the range of viscosity of the adhesive at the time of pasting by taking into consideration the prevention of airspace and excess runoff of adhesive suggested in [0028] of document 2.

The subject matter of claim 4 does not appear to involve an inventive step in view of document 1-4. Setting the time for peeling off the carrier film 2 described in document 3 from the adhesive just before sticking a wafer to a dicing film is a mere matter of design variation. Therefore, a person skilled in the art could have easily conceived of this idea.

The subject matter of claim 5 does not appear to involve an inventive step in view of documents 2 and 4. With regard to the adhesive described in document 1, a person skilled in the art could have easily conceived the idea of adjusting the range of viscosity of adhesive at the time of pasting by taking into consideration the prevention of airspace and excess runoff of adhesive suggested in [0028] of document 2.

The subject matters of claims 6, 9 and 10 do not appear to involve an inventive step in view of documents 1-4. In each case, a person skilled in the art could have easily conceived the idea of adjusting the range of viscosity of adhesive at the time of pasting by taking into consideration the prevention of airspace and excess runoff of adhesive implied in [0028] of document 2.

The subject matter of claim 12 does not appear to involve an inventive step in view of documents 1-4. Document 1 or 4 describes that the adhesion process is completed by using a semi-hardened thermosetting polyimide resin for temporary bonding a wafer to a dicing film, then heat

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITYInternational application No.  
PCT/JP2004/014865Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement

hardening the said resin to turn the bonded layer into a polyimide. A person skilled in the art could have easily conceived the idea of carrying out this heat hardening process after the mounting process.

The subject matter of claim 13 does not appear to involve an inventive step in view of documents 1-4. Although document 1 or 4 describes that a wafer is temporarily bonded to a dicing film by using a thermosetting type of adhesive as a semi-hardened material, it can be judged that essentially the bonding is in the form of a film.

The subject matter of claim 14 does not appear to involve an inventive step in view of documents 1-4. [0038] of document 1 or [0022] of document 4 wherein a dicing saw is explained with examples.

Since none of the documents cited in the ISR describe the subject matters of claims 7 and 8, 11, 15-20, particularly the point that a thermosetting type adhesive does not react to thermosetting at the time of pasting, the said subject matters are non-obvious to a person skilled in the art.

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITYInternational application No.  
PCT/JP2004/014865

## Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

The phrase "fabricating IC chips with adhesion from a wafer" described on page 1 [0001] should be "fabricating IC chips with adhesive from a wafer."

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITYInternational application No.  
PCT/JP2004/014865

## Box No. VIII Certain observations on the International application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

It is prescribed in claims 1-20 that at the pasting temperature the thermosetting adhesive have a viscosity of 20,000 Pa·s or below, but in terms of the pros and cons of the prior art described in, for example, [0028] of patent publication No. 2002-265888, generally speaking, the pressure and time of pasting are regarded as factors that should not be ignored when trying to realize the adhesion between IC chip and adhesive without creating airspace. However, claims 1-20 relate to inventions that do not take into consideration these factors, so that the descriptions in claims 1-20 are not enough to prove their sufficiency for acquiring the desired effect of "preventing the appearance of a void." Consequently, claims 1-20 are not sufficiently backed up by the description.